

In re Patent Application of
GORSUCH ET AL.
Serial No. Not Yet Assigned
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In the Claims:

Claims 1-2 (Cancelled).

3. (New) A base station for providing wireless communication of digital signals over a plurality of communication paths, the digital signals being communicated using at least one radio frequency channel via Code Division Multiple Access (CDMA) modulated radio signals, the base station comprising:

a wireless transceiver for establishing a communication session over a first digital communication path; and

a bandwidth management module connected to said wireless transceiver for allocating a plurality of code channels within the at least one radio frequency channel for exchanging digital signals over the first digital communication path during the communication session, the plurality of code channels including at least one traffic portion that is established for a predetermined time and at least one control portion that is continuously available, and a number of code channels allocated to the traffic portion changing during the communication session based upon bandwidth requirements;

said bandwidth management module reallocating the at least one traffic portion from the first digital communication path to a second digital communication path if an extension of time is not requested from the base station over the first digital communication path for the at least one traffic portion, or if the base station no longer has digital signals to transmit over the first digital communication path via the at least one traffic portion, but with the at least one

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reallocated traffic portion appearing as though it is still continuously available to the first digital communication path.

4. (New) A base station according to Claim 3 wherein the number of allocated code channels changes during the communication session.

5. (New) A base station according to Claim 3 wherein said bandwidth management module changes the number of code channels allocated to the at least one traffic portion based on requests received over the first or second first digital communication paths via the at least one control portion of the communication session.

6. (New) A base station according to Claim 3 wherein said bandwidth management module changes the number of code channels allocated to the at least one traffic portion based on its need to transmit digital signals over the first or second digital communication paths.

7. (New) A base station according to Claim 3 wherein said bandwidth management module further allocates the code channels based upon a quality of service associated with the first and second digital communication paths.

8. (New) A base station according to Claim 7 wherein the quality of service is based upon at least one of throughput, data rate, latency and jitter.

9. (New) A base station according to Claim 3

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wherein the at least one traffic portion and the at least one control portion are multiplexed on a same code channel.

10. (New) A base station according to Claim 3 wherein the at least one traffic portion and the at least one control portion are on separate code channels.

11. (New) A base station according to Claim 3 wherein said bandwidth management module reallocates the at least one traffic portion from the second digital communication path back to the first digital communication path if a request to transmit digital signals is received via the at least one control portion over the first digital communication path.

12. (New) A base station according to Claim 3 wherein said bandwidth management module reallocates the at least one traffic portion from the second digital communication path back to the first digital communication path if there is no longer a need to transmit digital signals over the second digital communication path.

13. (New) A base station according to Claim 3 wherein the digital signals comprise at least one of voice and data signals.

14. (New) A base station according to Claim 3 wherein the wireless communication of digital signals is performed with a first subscriber unit over the first digital communication path, and with a second subscriber unit over the second digital communication path.

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15. (New) A base station according to Claim 14 wherein the at least one radio frequency channel comprises a first radio frequency channel for establishing a forward code channel between said wireless transceiver and the first subscriber unit, and a second radio frequency channel for establishing a reverse code channel between the first subscriber unit and said wireless transceiver.

16. (New) A base station according to Claim 15 wherein said bandwidth management module assigns both the forward and reverse code channels.

17. (New) A base station according to Claim 15 wherein the forward and reverse code channels are multiplexed on a single radio frequency channel.

18. (New) A base station according to Claim 15 wherein the forward and reverse code channels are on different radio frequency channels.

19. (New) A subscriber unit for providing wireless communication of digital signals between terminal equipment connected therewith and a first digital communication path, the digital signals being communicated using at least one radio frequency channel via Code Division Multiple Access (CDMA) modulated radio signals, the subscriber unit comprising:

a wireless transceiver for establishing a communication session over the first digital communication path;

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a bandwidth management module connected to said wireless transceiver for receiving over the first digital communication path a plurality of allocated code channels within the at least one radio frequency channel to exchange digital signals during the communication session, the plurality of allocated code channels including at least one traffic portion that is established for a predetermined time and at least one control portion that is continuously available, and a number of code channels allocated to the traffic portion changing during the communication session based upon bandwidth requirements;

if said bandwidth management module does not request an extension of time from over the first digital communication path for the at least one traffic portion, or if there is no longer has a need to transmit digital signals to the subscriber unit over the first digital communication path, then the at least one traffic portion is reallocated to a second digital communication path associated with a second subscriber unit; and

a spoofing module connected to said bandwidth management module so that the reallocated traffic portion appears as though it is still continuously available to said wireless transceiver over the first digital communication path.

20. (New) A subscriber unit according to Claim 19 wherein the number of allocated code channels changes during the communication session.

21. (New) A subscriber unit according to Claim 19 wherein the number of code channels allocated to the at least

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one traffic portion are changed if said bandwidth management module requests, via the at least one control portion, a need to transmit digital signals.

22. (New) A subscriber unit according to Claim 19 wherein the code channels are further allocated based upon a quality of service associated with the first and second digital communication paths.

23. (New) A subscriber unit according to Claim 22 wherein the quality of service is based upon at least one of throughput, data rate, latency and jitter.

24. (New) A subscriber unit according to Claim 19 wherein the at least one traffic portion and the at least one control portion are multiplexed on a same code channel.

25. (New) A subscriber unit according to Claim 19 wherein the at least one traffic portion and the at least one control portion are on separate code channels.

26. (New) A subscriber unit according to Claim 19 wherein the at least one traffic portion is reallocated from the second subscriber unit back to the first subscriber unit if said bandwidth management module requests, via the at least one control portion, a need to transmit digital signals.

27. (New) A subscriber unit according to Claim 19 wherein the digital signals comprise at least one of voice and data signals.

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28. (New) A subscriber unit according to Claim 19 wherein reallocation of the at least one traffic portion from the first digital communication path to the second digital communication path is performed by a base station.

29. (New) A subscriber unit according to Claim 28 wherein the at least one radio frequency channel comprises a first radio frequency channel for establishing a forward code channel between the base station and said wireless transceiver, and a second radio frequency channel for establishing a reverse code channel between said wireless transceiver and the base station.

30. (New) A subscriber unit according to Claim 29 wherein the forward and reverse code channels are multiplexed on a single radio frequency channel.

31. (New) A subscriber unit according to Claim 29 wherein the forward and reverse code channels are on different radio frequency channels.

32. (New) A digital communication system comprising:

 a first subscriber unit at a first site for providing wireless communication of digital signals;

 a second subscriber unit at a second site for providing wireless communication of digital signals;

 a base station for establishing a communication session with said first subscriber unit over a first digital communications path, the digital signals being communicated

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using at least one radio frequency channel via Code Division Multiple Access (CDMA) modulated radio signals;

said base station allocating a plurality of code channels within the at least one radio frequency channel for said first subscriber unit to exchange digital signals during the communication session, the plurality of code channels including at least one traffic portion that is established for a predetermined time, and at least one control portion that is continuously available, and a number of code channels allocated to the traffic portion changing during the communication session based upon bandwidth requirements;

said base station reallocating the at least one traffic portion to said second subscriber unit for establishing a second digital communications path therewith if said first subscriber unit does not request an extension of time from said base station for the at least one traffic portion, or if said base station no longer has digital signals to transmit to said first subscriber unit via the at least one traffic portion, but with the at least one reallocated traffic portion appearing as though it is still continuously available to said first subscriber over the first digital communication path.

33. (New) A digital communication system according to Claim 32 wherein the at least one traffic portion is only allocated to one of said first or second subscriber units at a time; and wherein the at least one control portion is shared by said first and second subscriber units.

34. (New) A digital communication system according to Claim 32 wherein the number of allocated code channels

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changes during the communication session.

35. (New) A digital communication system according to Claim 32 wherein said base station changes the number of code channels allocated to the at least one traffic portion based on requests received from said first or second subscriber units via the control portion of the communication session.

36. (New) A digital communication system according to Claim 32 wherein said base station changes the number of code channels allocated to the at least one traffic portion based on its need to transmit digital signals to said first or second subscriber units.

37. (New) A digital communication system according to Claim 32 wherein said base station further allocates the code channels based upon a quality of service associated with said first and second subscriber units.

38. (New) A digital communication system according to Claim 37 wherein the quality of service is based upon at least one of throughput, data rate, latency and jitter.

39. (New) A digital communication system according to Claim 32 wherein the at least one traffic portion and the at least one control portion are multiplexed on a same code channel.

40. (New) A digital communication system according to Claim 32 wherein the at least one traffic portion and the

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at least one control portion are on separate code channels.

41. (New) A digital communication system according to Claim 32 wherein said base station reallocates from said second subscriber unit the at least one traffic portion back to said first subscriber unit if said first subscriber unit request, via the at least one control portion, a need to transmit digital signals.

42. (New) A digital communication system according to Claim 32 wherein said base station reallocates, via the at least one control portion, from said second subscriber unit the at least one traffic portion back to said first subscriber if said base station needs to transmit digital signals to said second subscriber unit.

43. (New) A digital communication system according to Claim 32 wherein the digital signals comprise at least one of voice and data signals.

44. (New) A digital communication system according to Claim 32 wherein the at least one radio frequency channel comprises a first radio frequency channel for establishing forward code channels between said base station and said first and second subscriber units, and a second radio frequency channel for establishing reverse code channels between said first and second subscriber units and said base station.

45. (New) A digital communication system according to Claim 44 wherein said base station assigns both the forward and reverse code channels.

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46. (New) A digital communication system according to Claim 44 wherein the forward and reverse code channels are multiplexed on a single radio frequency channel.

47. (New) A digital communication system according to Claim 44 wherein the forward and reverse code channels are on different radio frequency channels.